Fig. 1

Fig. 2

Fig. 3

56456560 09/26/2000

APPROVED	CLASS	DRAFTSMAN
BY		

APPRC'/ED
BY
DRAFTSMAN
O.G. FIG.
CLASS
SUBCLASS

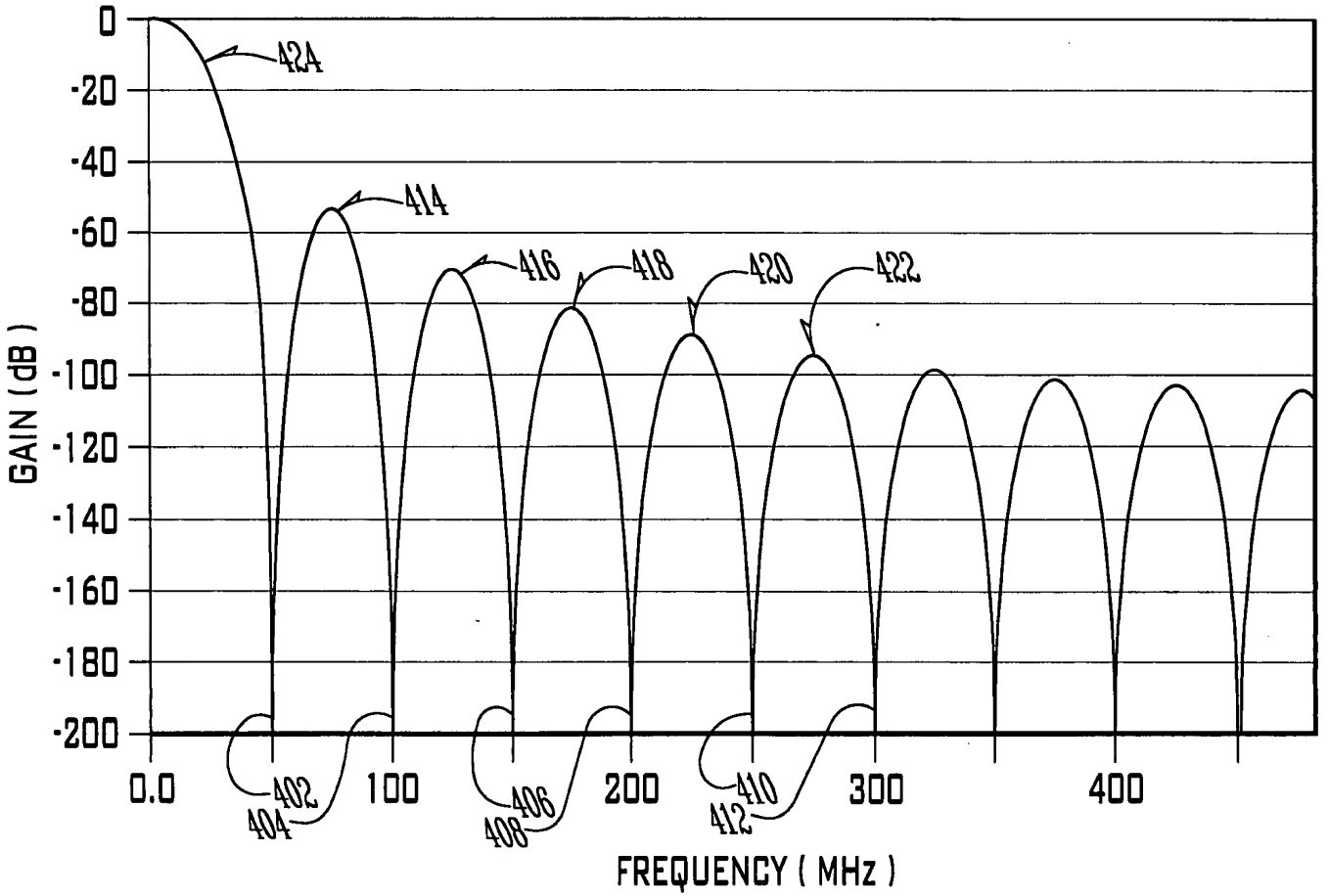

Fig.4

09390670.092199

APPRC'/ED
BY
DRAFTSMAN
O.G. FIG.
CLASS
SUBCLASS

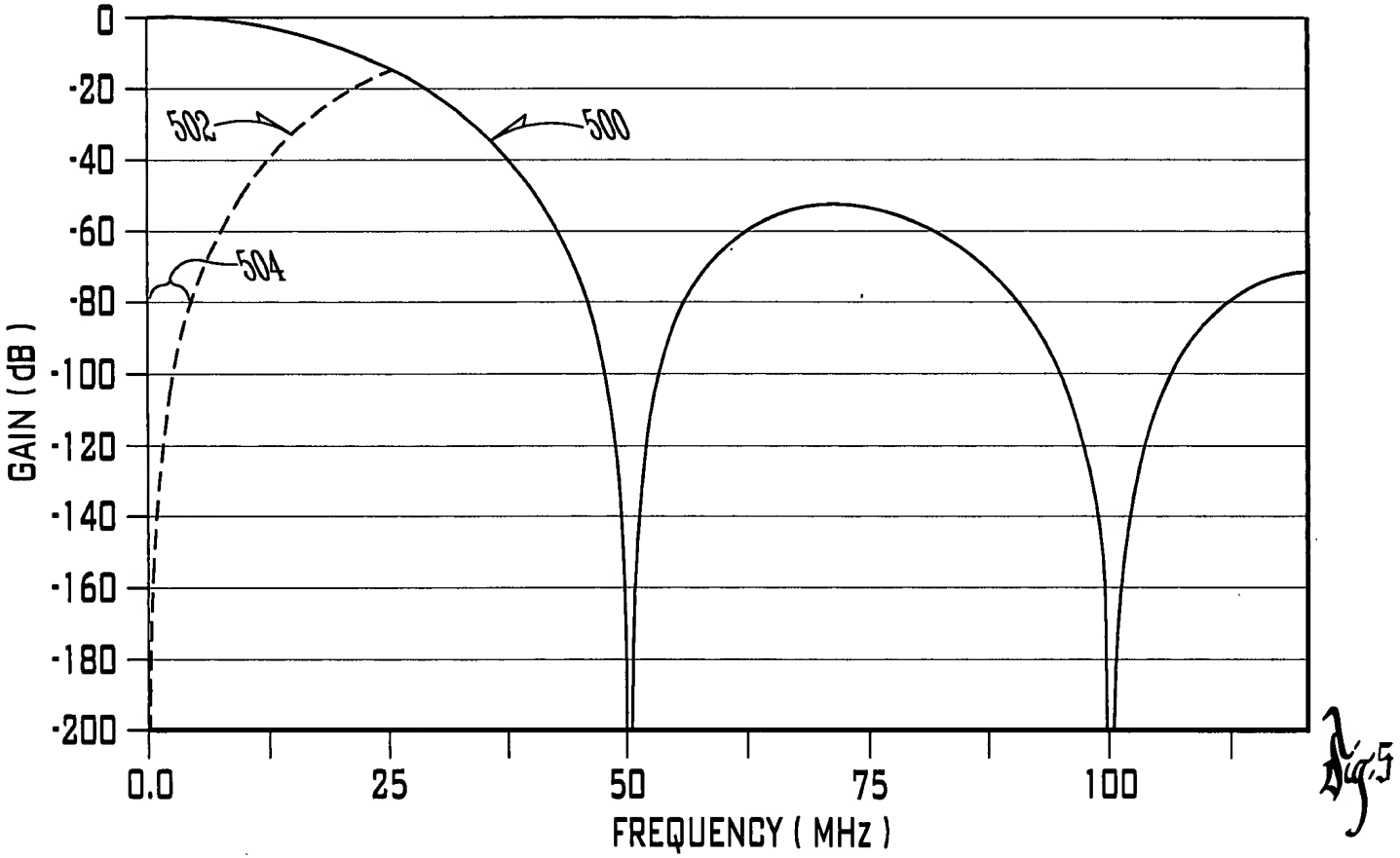

Fig.5

09999578.092199

Fig. 6

APPRC'/ED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

APPROVED BY DRAFTSMAN
O.G. FIG.
CLASS
SUBCLASS

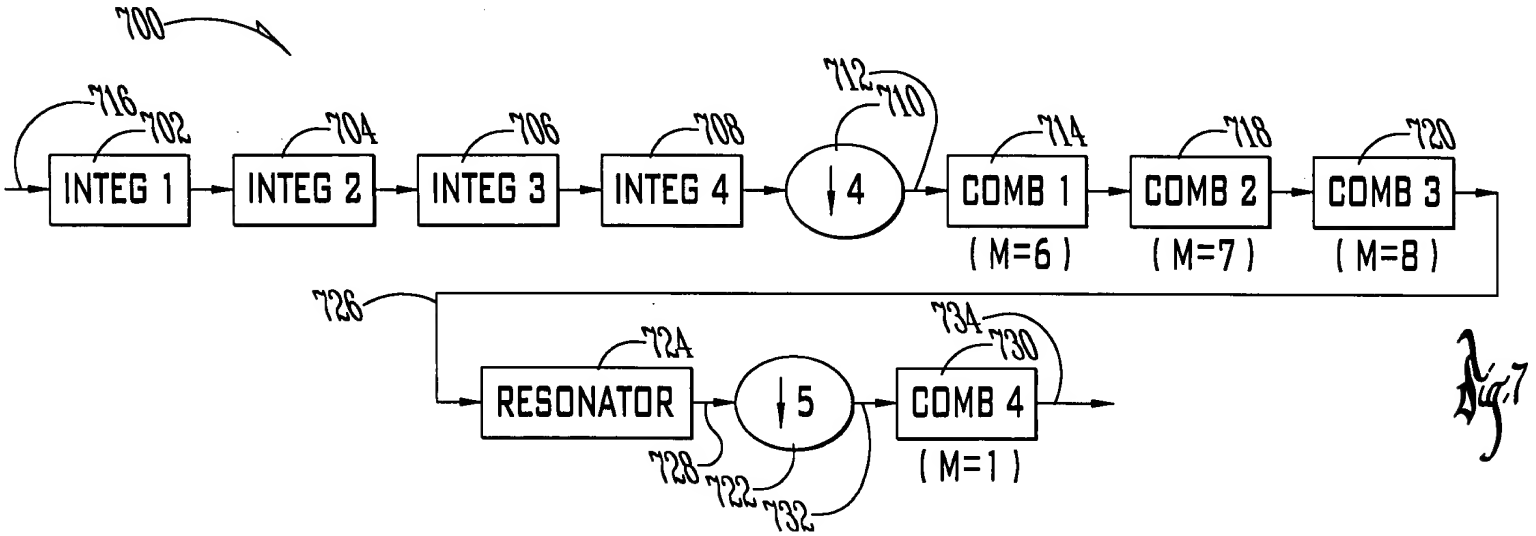

Fig.7

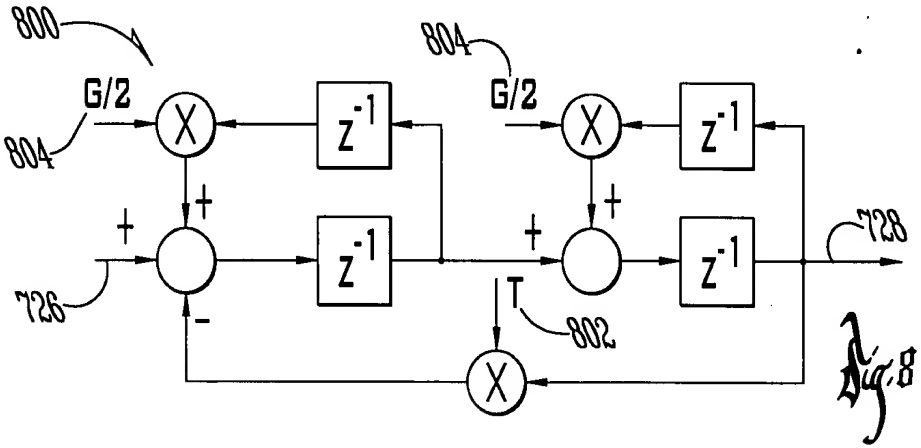

Fig.8

09309679.092199

APPRC'ED
BY
DRAFTSMAN
O.G. FIG.
CLASS
SUBCL

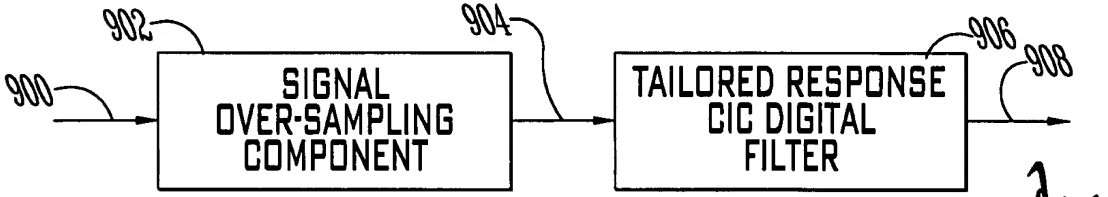

Fig. 9

09309579 .092199

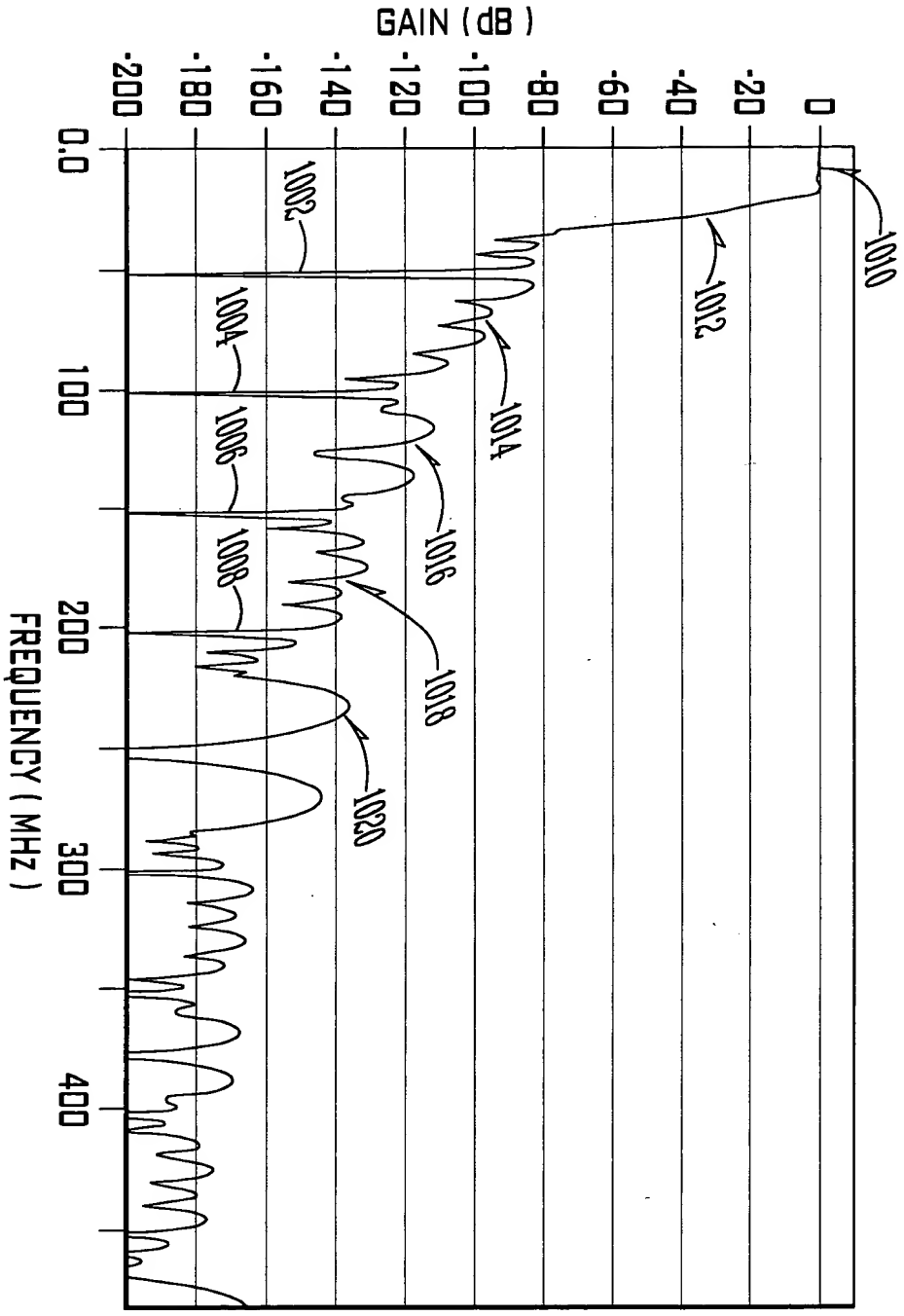

Fig. 10

APPRC'/ED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

APPROVED
BY
DRAFTSMAN
O.G. FIG.
CLASS
SUBCLASS

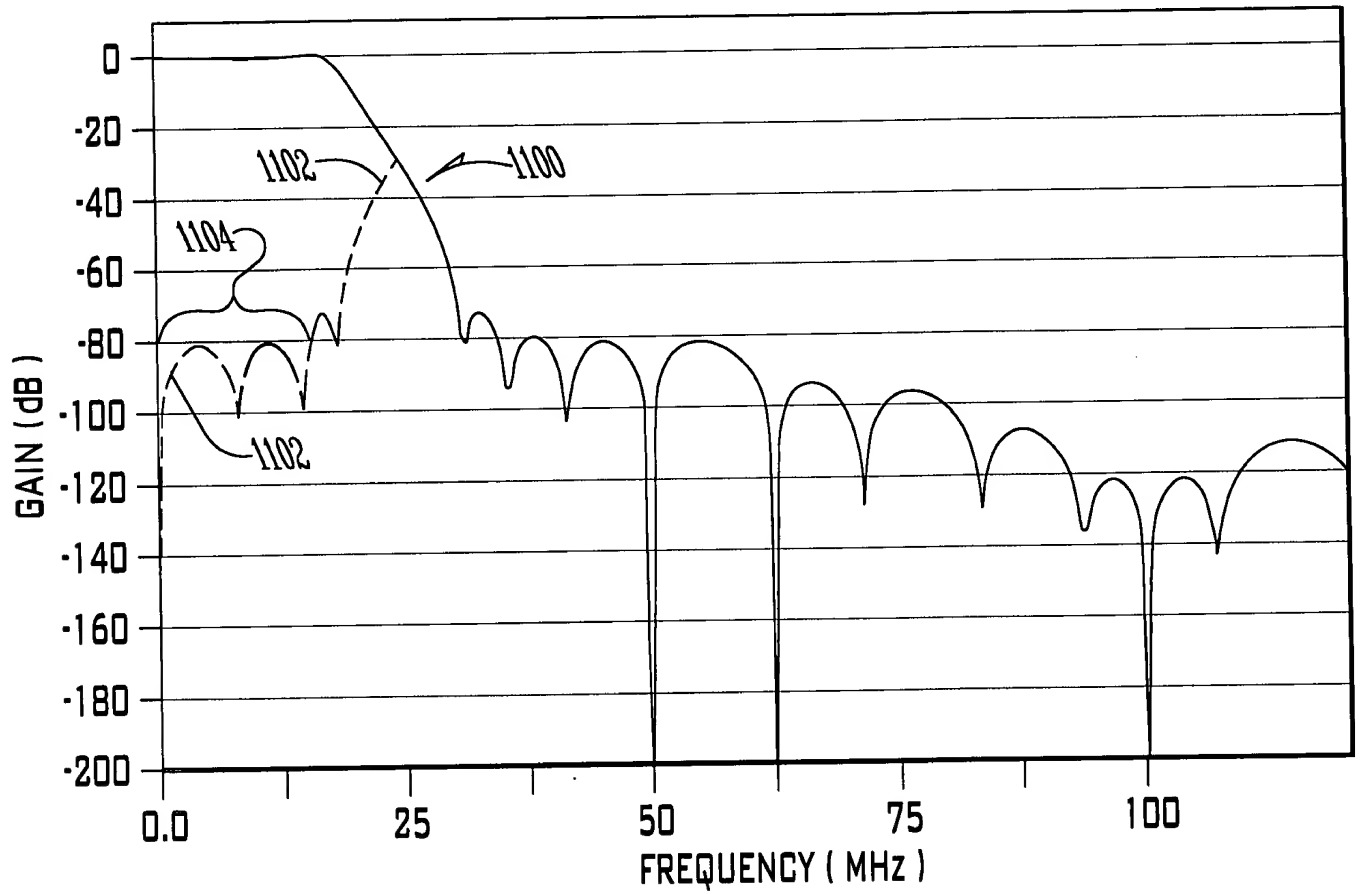

Fig. 11

09399678.092199

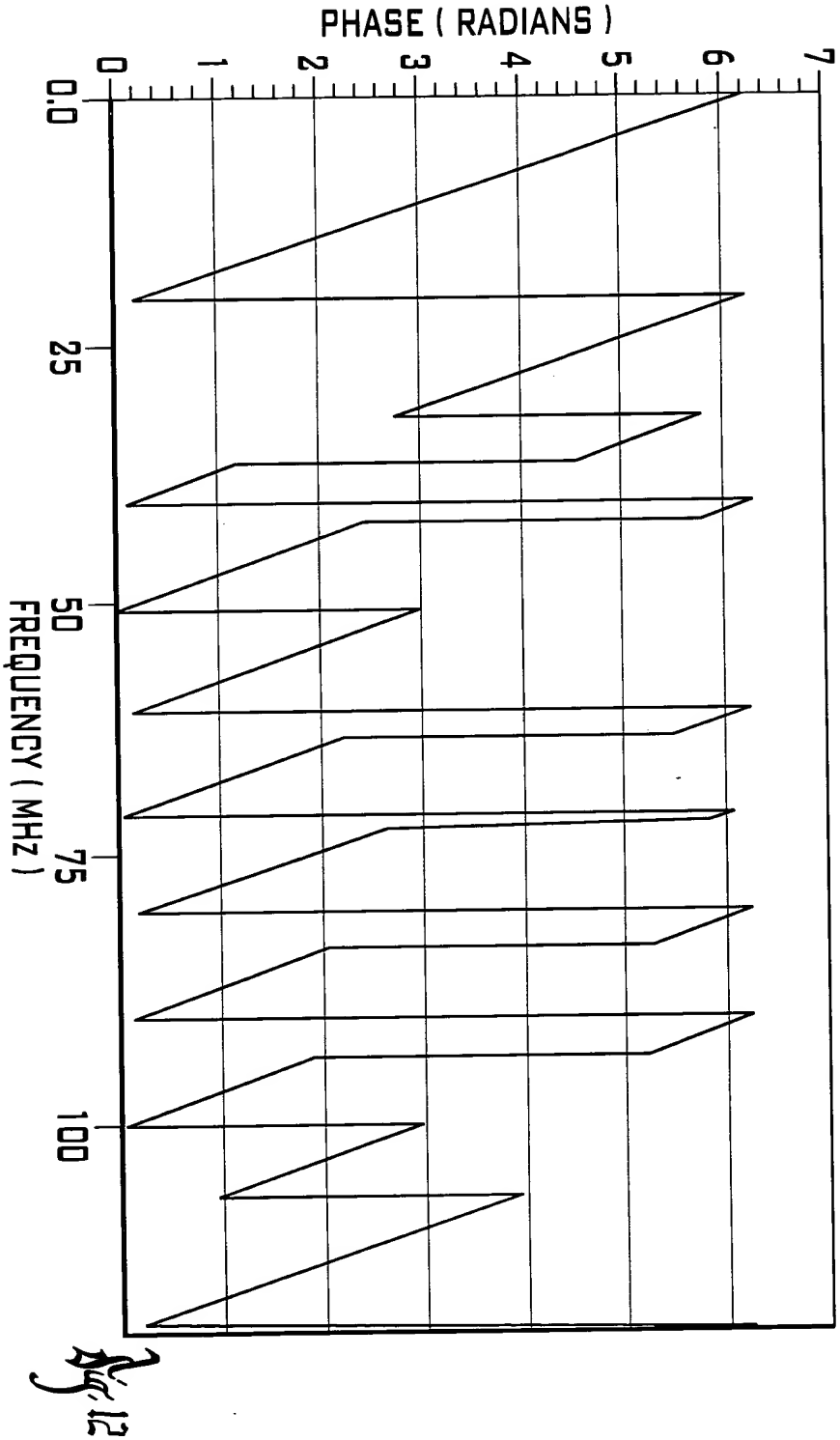

Fig. 12

0.G. FIG.
APPRC./ED
BY
DRAFTSMAN
CLASS
SUBCLASS

6,175,851 B1 Jan. 16, 2001

Fig. 13

APPRC'/ED
BY
DRAFTSMAN
O.G. FIG.
CLASS
SUBCL.

Fig. 14

APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
DRAFTSMAN	

1 STAGES	0, A, A+B, A+B+C, A+B+C+D, A+B+C+D+E,...
2 STAGES	0, 0, A, 2A+B, 3A+2B+C, 4A+3B+2C+D, 5A+4B+3C+2D+E,...
3 STAGES	0, 0, 0, A, 3A+B, 6A+3B+C, 10A+6B+3C+D, 15A+10B+6C+3D+E,...
4 STAGES	0, 0, 0, 0, A, 4A+B, 10A+4B+C, 20A+10B+4C+D, 35A+20B+10C+4D+E,...
5 STAGES	0, 0, 0, 0, 0, A, 5A+B, 15A+5B+C, 35A+15B+5C+D, 70A+35B+15C+5D+E,...
6 STAGES	0, 0, 0, 0, 0, 0, A, 6A+B, 21A+6B+C, 56A+21B+6C+D, 126A+56B+21C+6D+E,...
7 STAGES	0, 0, 0, 0, 0, 0, 0, A, 7A+B, 28A+7B+C, 84A+28B+7C+D, 210A+84B+28C+7D+E,...
8 STAGES	0, 0, 0, 0, 0, 0, 0, 0, A, 8A+B, 36A+8B+C, 120A+36B+8C+D, 330A+120B+36C+8D+E,...

1500

1506 1502 1504

Fig. 15

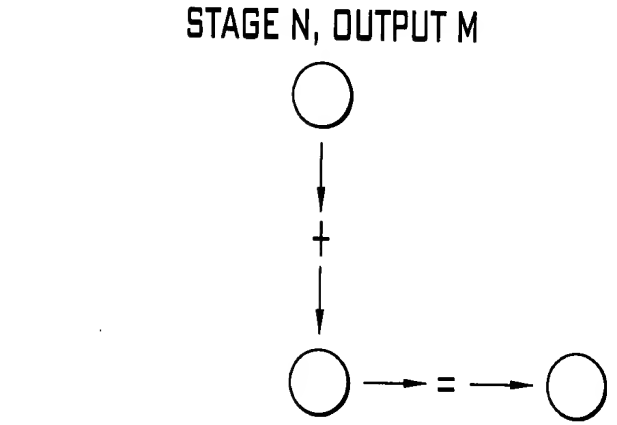

Fig. 16

APPROVED BY DRAFTSMAN
CLASS
SUBCLASS
O.G. FIG.

09999678 .092199

APPROVED BY DRAFTSMAN
O.G. FIG.
CLASS
SUBCLASS

1700

1 STAGES	0, 1, 1, 1, 1, 1, ...
2 STAGES	0, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, ...
3 STAGES	0, 0, 0, 1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78, 91, 105, 120, 136, 153, 171, 190, 210, 231, 253, 276, 300, 325, 351, 378, 406, 435, 465, 496, 528, 561, 595, 630, 666, 703, 741, 780, 820, 861, 903, 946, 990, 1035, 1081, 1128, 1176, 1225, 1275, 1326, 1378, 1431, ...
4 STAGES	0, 0, 0, 0, 1, 4, 10, 20, 35, 56, 84, 120, 165, 220, 286, 364, 455, 560, 680, 816, 969, 1140, 1330, 1540, 1771, 2024, 2300, 2600, 2925, 3276, 3654, 4060, 4495, 4960, 5456, 5984, 6545, 7140, 7770, 8436, 9139, 9880, 10660, 11480, 12341, 13244, 14190, 15180, 16215, 17296, 18424, 19600, 20825, 22100, 23426, 24804, ...
5 STAGES	0, 0, 0, 0, 0, 1, 5, 15, 35, 70, 126, 210, 330, 495, 715, 1001, 1365, 1820, 2380, 3060, 3876, 4845, 5985, 7315, 8855, 10626, 12650, 14950, 17550, 20475, 23751, 27405, 31465, 35960, 40920, 46376, 52360, 58905, 66045, 73815, 82251, 91390, 101270, 111930, 123410, 135751, 148995, 163185, 178365, 194580, 211876, 230300, 249900, 270725, 292825, 316251, ...
6 STAGES	0, 0, 0, 0, 0, 0, 1, 6, 21, 56, 126, 252, 462, 792, 1287, 2002, 3003, 4368, 6188, 8568, 11628, 15504, 20349, 26334, 33649, 42504, 53130, 65780, 80730, 98280, 118755, 142506, 169911, 201376, 237336, 278256, 324632, 376992, 435897, 501942, 575757, 658008, 749398, 850668, 962598, 1086008, 1221759, 1370754, 1533939, 1712304, 1906884, 2118760, 2349060, 2598960, 2869685, 3162510, ...
7 STAGES	0, 0, 0, 0, 0, 0, 0, 1, 7, 28, 84, 210, 462, 924, 1716, 3003, 5005, 8008, 12376, 18564, 27132, 38760, 54264, 74613, 100947, 134596, 177100, 230230, 296010, 376740, 475020, 593775, 736281, 906192, 1107568, 1344904, 1623160, 1947792, 2324784, 2760681, 3262623, 3838380, 4496388, 5245786, 6096454, 7059052, 8145060, 9366819, 10737573, 12271512, 13983816, 15890700, 18009460, 20358520, 22957480, 25827165, ...
8 STAGES	0, 0, 0, 0, 0, 0, 0, 0, 1, 8, 36, 120, 330, 792, 1716, 3432, 6435, 11440, 19448, 31824, 50388, 77520, 116280, 170544, 245157, 346104, 480700, 657800, 888030, 1184040, 1560780, 2035800, 2629575, 3365856, 4272048, 5379616, 6724520, 8347680, 10295472, 12620256, 15380937, 18643560, 22481940, 26978328, 32224114, 38320568, 45379620, 53524680, 62891499, 73629072, 86900584, 99884400, 115775100, 133784560, 154143080, 177100560, ...

Fig. 17

09396878_092199

APPROVED
O.G. FIG.
BY
CLASS
SUBCLASS
DRAFTSMAN

PATH 4:

1800

STAGE 4	1, 35, 165, 455, 969, 1771, ...
STAGE 3	1, 34, 130, 290, 514, 802, ...
STAGE 2	1, 33, 96, 160, 224, 288, ...
STAGE 1	1, 32, 63, 64, 64, 64, ...

PATH 3:

1802

STAGE 4	4, 56, 220, 560, 1140, 2024, ...
STAGE 3	4, 52, 164, 340, 580, 884, ...
STAGE 2	4, 48, 112, 176, 240, 304, ...
STAGE 1	4, 44, 64, 64, 64, 64, ...

PATH 2:

1804

STAGE 4	10, 84, 286, 680, 1330, 2300, ...
STAGE 3	10, 74, 202, 394, 650, 970, ...
STAGE 2	10, 64, 128, 192, 256, 320, ...
STAGE 1	10, 54, 64, 64, 64, 64, ...

PATH 1:

1806

STAGE 4	20, 120, 364, 816, 1540, 2600, ...
STAGE 3	20, 100, 244, 452, 724, 1060, ...
STAGE 2	20, 80, 144, 208, 272, 336, ...
STAGE 1	20, 60, 64, 64, 64, 64, ...

Fig. 18

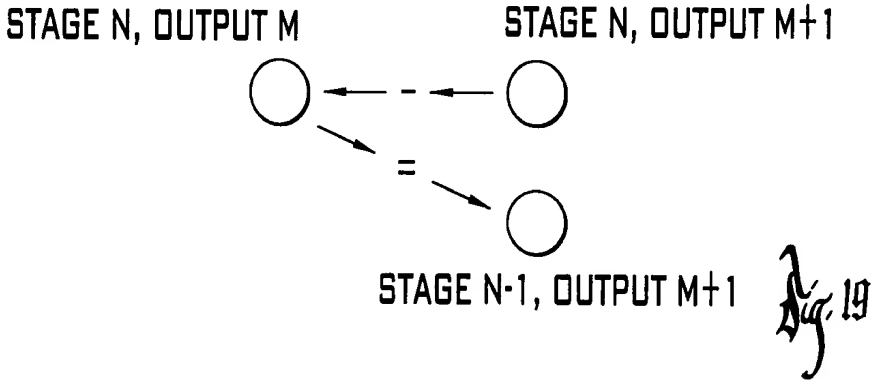

Fig. 19

09896678 .092199

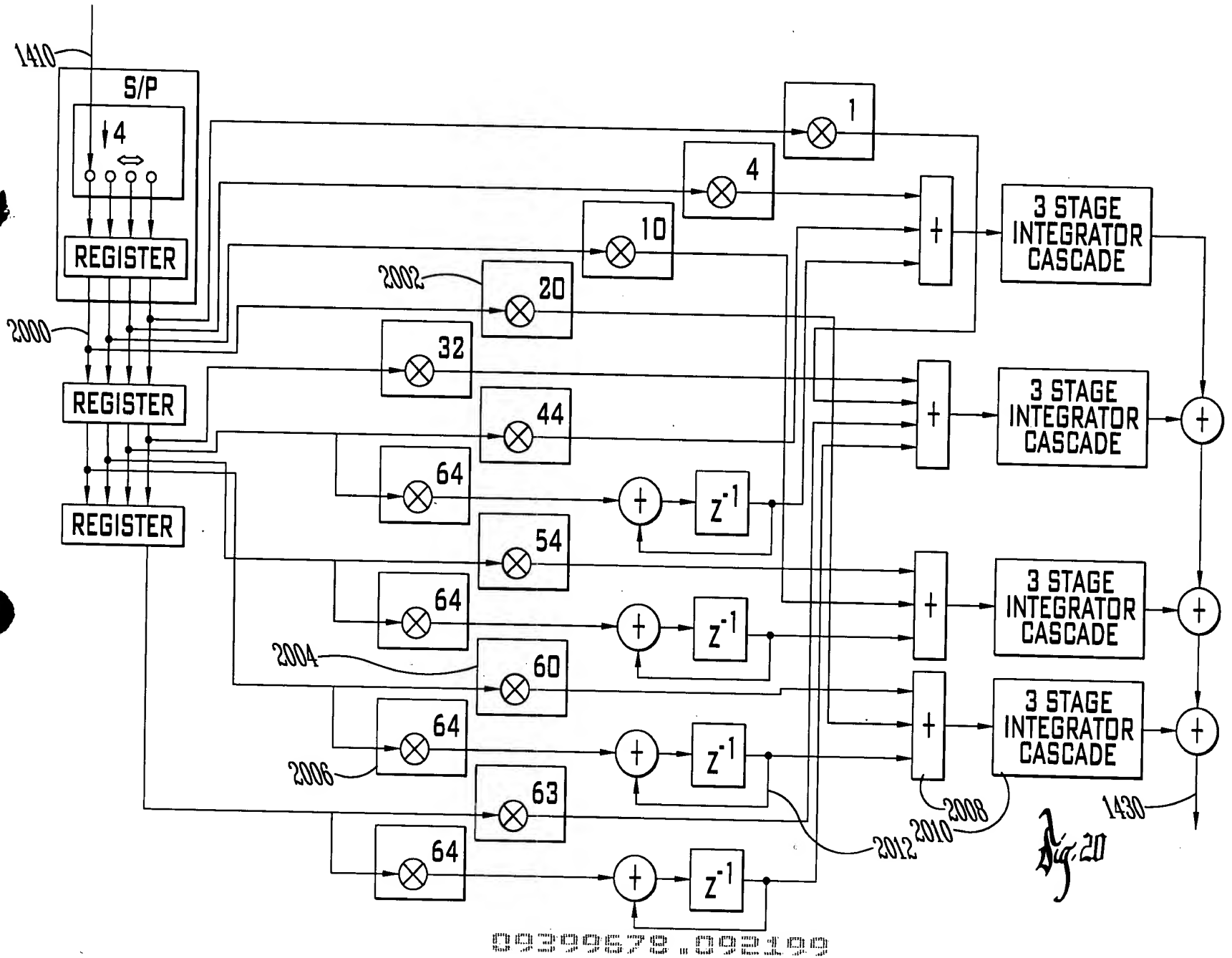

Fig. 20

09390678 .092199

A, 4A+B, 10A+4B+C, 20A+10B+4C+D, 35A+20B+10C+4D+E, 56A+35B+20C+10D+4E+F, 84A+56B+35C+20D+10E+4F+G, 120A+84B+56C+35D+20E+10F+4G+H, 165A+120B+84C+56D+35E+20F+10G+4H+I, 220A+165B+120C+84D+56E+35F+20G+10H+4I+J, 286A+220B+165C+120D+84E+56F+35G+20H+10I+4J+K, 364A+286B 220C+165D+120E+84F+56G+35H+20I+10J+4K+L, 455A+364B+286C+220D+165E+120F+84G+56H+35I+20J+10K+4L+M, 560A+455B+364C+286D+220E+165F+120G+84H+56I+35J+20K+10L+4M+N, 680A+560B+455C+364D+286E+220F+165G+120H+84I+56J+35K+20L+10M+4N+O, 816A+680B+560C+455D+364E+286F+220G+165H+120I+84J+56K+35L+20M+10N+4O+P, ...

Fig.21

PATH 1:

20A, 120A+20E, 364A+120E+20I, 816A+364E+120I+20M, ...

PATH 2:

10B, 84B+10F, 286B+84F+10J, 680B+286F+84J+10N, ...

PATH 3:

4C, 56C+4G, 220C+56G+4K, 560C+220G+56K+4O, ...

PATH 4:

D, 35D+H, 165D+35H+L, 455D+165H+35L+P, ...

PATH SUM:

20A+10B+4C+D, 120A+84B+56C+35D+20E+10F+4G+H, 364A+256B+220C+165D+120E+84F+56G+35H+20I+10J+4K+L, 816A+680B+560C+455D+364E+286F+220G+165H+120I+84J+56K+35L+20M+10N+4O+P, ...

Fig.22